Year8 into 9 options -CS & IT - Watch Video

EXAMINING BODY: OCR

EXAMINATION REQUIREMENTS

Examination 100% of total qualification

Paper 1: Computer systems 50%

Paper 2: Computational thinking, algorithms and programming 50%

COURSE DESCRIPTION AND AIMS

Content of Computer systems (J277/01)

This component will introduce you to the fundamental aspects of Computer Science - how the central

processing unit (CPU), memory and storage work together to form a functioning computer. The internet and

how it works through wired and wireless networks and the protocols associated with it. The unit also covers

system security and system software along with the ethical, legal, cultural and environmental concerns

associated with digital devices.

Content of Computational thinking, algorithms and programming (J277/02)

In this component you will be introduced to computational thinking - a form of logical problem approach and

problem solving which is key to solving problems through programming.

In algorithms you will learn some of the standard sorting and searching algorithms (such as bubble sort and

binary search) at a conceptual level and be taught how to create flow-charts and pseudocode in order to

create your own algorithms.

You will be taught about how all data on a computer is stored as binary digits (1’s and 0’s) and how from this

we can create images, sound, motion and everything else that digital devices are able to represent.

You will also be introduced to the fundamental programming techniques (sequence, selection, iteration) and

procedural programming and be given programming tasks to complete throughout the course.

The topics covered will be:

· Algorithms

· Programming fundamentals

· Producing robust programs

· Boolean logic

· Programming languages and Integrated Development Environments

PROGRESSION

This qualification supports progress to further study, including A Levels, BTECs and Diplomas in Computing,

Computer Science, IT and related subjects, and on to degree level in the areas of computing, engineering

and science.

To progress to A Level Computer Science, you will be required to obtain at least a grade 6 at GCSE in

Computer Science. (with evidence of confident programming in Python) and a grade 6 in Maths.